

MIDI CONTROLLER $\pi\lambda^2$ (FIRMWARE V2.0)

Dec.	Hex.	Meaning	Comments (dec. numbers)
1	1	Modulation Wheel	0-127 (refer to #31 and #82)
3	3	Waveform/Submode Select	0: normal, 1: second (2-127 unused)
5	5	Portamento Time*	0-127
7	7	Out Volume	0-127
10	A	PWM 1 & 2*	0-127 (overwrites both)
14	E	Filter Cutoff - Analog	0-127
15	F	Filter Resonance - Digital	0-127
16	10	ADSR Release	0-127
17	11	ADSR Attack	0-127
18	12	Digital Filter Cutoff	0-127
19	13	ADSR Decay	0-127
20	14	OSC Volume (Pre Filter)	0-127
21	15	ADSR Sustain	0-127
22	16	DC Offset Filter	0-127
23	17	PWM 2*	0-127
24	18	Waveform/Submode (1-4)	0-31: 1, 32-63: 2, 64-95: 3, 96-127: 4
25	19	PWM 1*	0-127
26	1A	Dual/Detune (on/off)	64-127: mono on (dual/detune off)
27	1B	Dual/Octave (on/off)	64-127: mono on (dual/octave off)
28	1C	Filter Type - Digital	0-63: LP, 64-95: BP, 96-127: HP
29	1D	Filter Link ADSR (on/off)	64-127: on
30	1E	Key Off Attack (on/off)	64-127: on (for bass sounds)
31	1F	Modulation Wheel Mode	0-127 (bitpattern)
64	40	Sustain - Hold (on/off)	64-127: on
65	41	Portamento (on/off)	64-127: on
70	46	Filter Cutoff - Analog	0-127
71	47	Filter Resonance - Digital	0-127
72	48	ADSR Release	0-127
73	49	ADSR Attack	0-127
74	4A	Filter Cutoff - Digital	0-127
75	4B	Waveform/Submode (1-4)	0-31: 1, 32-63: 2, 64-95: 3, 96-127: 4
76	4C	PWM 1*	0-127
77	4D	Dual/Detune (on/off)	64-127: mono on (dual/detune off)
78	4E	Dual/Octave (on/off)	64-127: mono on (dual/octave off)
79	4F	Filter Type - Digital	0-63: LP, 64-95: BP, 96-127: HP
80	50	Filter Link ADSR (on/off)	64-127: on
81	51	Key Off Attack (on/off)	64-127: on (for bass sounds)
82	52	Modulation Wheel Mode	0-127 (bitpattern)
83	53	DC Offset Wave (on/off)*	64-127: on
85	55	LFO PWM Mod. (on/off)	64-127: on
86	56	LFO Pitch Mod. (on/off)	64-127: on
87	57	LFO Filter Mod. (on/off)	64-127: on
88	58	LFO Amp Mod. (on/off)	64-127: on
89	59	Note Priority / Aftertouch	Note Priority: 64-127: lowest Aftertouch: 32-127: on
91	5B	ADSR Decay	0-127
92	5C	OSC Volume (Pre Filter)	0-127
93	5D	ADSR Sustain	0-127
94	5E	DC Offset Filter	0-127
95	5F	PWM 2*	0-127
120	78	All Sound Off	0
123	7B	All Notes Off	0
126	7E	Mono On	0-127
127	7F	Dual On	0

* Different mapping in bassdrum submode (second mode)